

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested. Claims 1-27, 30-31, 42-43, and 53-54 have been canceled. Claims 28, 32, 38-40, 44, 50 and 52 have been amended. Claims 28-29, 32-41, and 44-52 are currently pending in the application.

CLAIM OBJECTIONS

In the Final Office Action, the Examiner objected to claims 28, 32, 39-40, 44 and 52 due to certain informalities. Claims 28, 32, 39-40, 44 and 52 have been amended to remove these informalities. Therefore, Applicants request that this objection be withdrawn.

CLAIM REJECTION UNDER 35 U.S.C. §101

In the Final Office Action, the Examiner rejected claims 40-54 under 35 U.S.C. §101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

With regard to claims 40-41 and 44-51 (claims 42 and 43 have been canceled), the Examiner objected to the use of the term "machine-readable storage medium", contending that such a term may be interpreted to include acoustic or light waves or carrier waves. Applicants respectfully disagree. A wave is not a "storage" medium. Because waves are transitory, they are incapable of storing instructions, as recited in claims 40-41 and 44-54. Thus, waves do not fall within the scope of the term "machine-readable storage medium". Accordingly, Applicants request that this rejection be withdrawn.

With regard to claim 52 (claims 53-54 have been canceled), the Examiner objected to the claim for reciting an apparatus that may be interpreted as software per se. Applicants do

not understand the rejection. Under 35 U.S.C. §112, sixth paragraph, it is clear that an element in a claim may be expressed as a means for performing a specified function without the recital of structure, material, or acts in support thereof. That is exactly what Applicants have done in claim 52. Since Applicants have complied with all of the requirements of 35 U.S.C. §112, sixth paragraph, Applicants submit that claim 52 is in proper form and is statutory as it currently stands. Accordingly, Applicants request that this rejection be withdrawn.

CLAIM REJECTION UNDER 35 U.S.C. §112

In the Final Office Action, the Examiner rejected claims 28-54 under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement. In the rejection, the Examiner referred to a number of different claims and claim limitations. Each of these is addressed below.

Claims 20, 40, and 52

The Examiner alleged that the recitations "wherein each user process in the first set of user processes has the first zone identifier associated therewith" and "wherein each user process in the second set of user processes has the second zone identifier associated" are not disclosed in the Specification. Without any admission as to the veracity of the Examiner's rejection, but rather in the interest of advancing prosecution, Applicants have amended claims 20, 40, and 52 to remove these recitations. Accordingly, Applicants request that the rejection of these claims be withdrawn.

Claims 30, 42, and 53

The Examiner alleged that the recitations "receiving a command to terminate the first application environment" and "in response to the command to terminate the first application environment" are not disclosed in the Specification. Without any admission as to the veracity of the Examiner's rejection, but rather in the interest of advancing prosecution, Applicants have canceled claims 30, 42, and 53. Therefore, Applicants request that the rejection of these claims be withdrawn.

Claims 31, 43, and 54

The Examiner alleged that the recitations "receiving a command to re-establish the first application environment" and "in response to the command to re-establish the first application environment" are not disclosed in the Specification. Without any admission as to the veracity of the Examiner's rejection, but rather in the interest of advancing prosecution, Applicants have canceled claims 31, 43, and 54. Therefore, Applicants request that the rejection of these claims be withdrawn.

Claims 34 and 46

The Examiner alleged that the recitation "terminating all user processes executing within the first non-global zone, thereby terminating the first application environment" is not disclosed in the Specification. Applicants respectfully disagree. In paragraphs 0067 and 0082, it is disclosed that when a non-global zone is halted, processes (including user processes) executing within the non-global zone are killed (i.e. terminated). In paragraph 0066, it is disclosed that the application environment within a non-global zone exists so long

as one or more user processes are executing within the non-global zone. This means that if the user processes executing within a non-global zone are terminated, then the application environment is also terminated. Based upon this rationale, Applicants submit that the above-noted recitation is fully described in the Specification, and hence, request that the rejection of these claims be withdrawn.

Claims 35 and 47

The Examiner alleged that the recitations "terminating all user processes executing within the first non-global zone, thereby terminating the first application environment" and "performing one or more tasks from the group consisting of stopping a scheduler process" are not disclosed in the Specification. Applicants respectfully disagree. As argued above in connection with claims 34 and 46, the recitation "terminating all user processes executing within the first non-global zone, thereby terminating the first application environment" is fully described in the Specification.

With regard to the recitation "performing one or more tasks from the group consisting of stopping a scheduler process", it is noted that when a non-global zone is halted, processes executing with that non-global zone are terminated (see e.g. paragraphs 0067, 0082, etc.). Since the scheduler process zsched (see e.g. Figs. 1 and 2A, etc.) is a process that executes within a non-global zone, that process is terminated as well. Thus, as part of halting a zone, a task of stopping a scheduler process is performed. This fact is made clear by the Specification, when read as a whole. Therefore, Applicants submit that the above-noted recitation is fully described in the Specification.

Accordingly, Applicants request that the rejection of these claims be withdrawn.

Claims 36 and 48

The Examiner alleged that the recitations "a first administrator" and "a second administrator" are not disclosed in the Specification. Applicants respectfully disagree. In paragraph 0040 of the Specification, it is disclosed that each non-global zone may be administered separately by a different zone administrator. The zone administrator assigned to a non-global zone can perform administrative tasks that affect the processes and other entities within that non-global zone but cannot change or affect anything in any other non-global zones. From this paragraph, it would be clear to one of ordinary skill in the art that a first administrator may be allowed to manage processes and resources within a first non-global zone and a second administrator may be allowed to manage processes and resources within a second non-global zone. Accordingly, Applicants submit that the above-noted recitations are fully described in the Specification, and request that the rejection of these claims be withdrawn.

Claims 38 and 50

The Examiner alleged that the recitation "wherein the configuration information comprises one or more parameters from the group consisting of a zone name, a path to a root directory for the first non-global zone, specification of one or more file systems to be mounted when the first non-global zone is **readied**, specification of one or more network interfaces, specification of one or more devices to be configured when the first non-global zone is **readied**" is not disclosed in the Specification. Without any admission as to the veracity of the Examiner's rejection, but rather in the interest of advancing prosecution,

Applicants have amended claims 30 and 50 to replace the word "readied" with "created". This amendment is fully supported by the Specification (see e.g. paragraphs 0012, 0043, etc.). Accordingly, Applicants request that the rejection of these claims be withdrawn.

CLAIM REJECTION UNDER 35 U.S.C. §103

In the Final Office Action, the Examiner rejected claims 28-54 under 35 U.S.C. §103(a) as being unpatentable over Schaefer (U.S. Publication No. 2002/0174215 A1) in view of Susser et al. (International Publication No. WO 00/45262). This rejection is respectfully traversed.

Claim 28

Claim 28 recites:

A machine-implemented method, comprising:
establishing, within a global operating system environment provided by a kernel instance, a first non-global zone which serves as a first virtual platform for supporting and isolating user processes, wherein the first non-global zone has a first zone identifier associated therewith, and wherein the first non-global zone is established and exists without requiring any user processes to be running therein;
establishing, within said global operating system environment, a second non-global zone which serves as a second virtual platform for supporting and isolating user processes, wherein the second non-global zone has a second zone identifier associated therewith, and wherein the second non-global zone is established and exists without requiring any user processes to be running therein;
executing a first set of one or more user processes within the first non-global zone;
executing a second set of one or more user processes within the second non-global zone; and
isolating the first set of one or more user processes within the first non-global zone and the second set of one or more user processes within the second non-global zone such that the first set of one or more user processes cannot access processes in the second non-global zone and the second set of one or more user processes cannot access processes in the first non-global zone.
(Emphasis added)

Claim 28 provides an advantageous method for enabling user processes executing in different non-global zones to be isolated from each other. Of particular note is that claim 28 specifically recites that the first non-global zone is established and exists without requiring any user processes to be running therein, and the second non-global zone is established and exists without requiring any user processes to be running therein. Schaefer and Susser, taken individually or in combination, fail to disclose at least this aspect of claim 28.

In the Final Office Action, the Examiner admits that Schaefer does not explicitly disclose this aspect of claim 28. However, the Examiner attempts to make up for the shortcomings of Schaefer by citing Susser, alleging that Susser teaches this aspect of claim 28. As support for the rejection, the Examiner cites page 11, lines 29-31, and execution contexts 770 and 780 of Fig. 7 of Susser. From these citations, it appears that the Examiner is interpreting the execution contexts 770, 780 of Susser to be the first and second non-global zones recited in claim 28. Upon review of the cited portions, Applicants respectfully submit that they do not teach what the Examiner contends.

Specifically, page 11, lines 29-31 of Susser merely state that the runtime system 740 (see Fig. 7 of Susser) can identify contexts by dividing the memory space into separate regions, each for a particular context, and correspondingly the object system 750 can associate objects with a context by allocating the object's storage in that context's memory space. This excerpt merely describes one way of implementing execution contexts (by dividing the memory space). There is absolutely nothing in this excerpt that teaches or suggests that an execution context can be established and exist without requiring any user processes to be running therein.

The Examiner also relies on the execution contexts 770 and 780 shown in Fig. 7. While it is true that the boxes in Fig. 7 representing these execution contexts 770, 780 do not show user processes executing within them, it does not necessarily follow from this that the execution contexts 770, 780 can be established and exist without any user processes running within them. Fig. 7 is a high level block diagram intended to provide an overview of the runtime environment of Susser. The user processes (e.g. applets, applications, objects, etc.) may have been left out of boxes 770 and 780 to avoid cluttering the drawing. It is noteworthy that in all of the other drawings of Susser in which an execution context is shown, at least one object or data structure is shown in each execution context. This would suggest that, in order to be established and exist, an execution context needs to have a user process running therein. Overall, it is not clear whether the execution context of Susser can be established and exist without requiring any user processes to be running therein. What is clear, though, is that Susser does not explicitly teach that an execution context can be established and exist without requiring any user processes to be running therein.

One factor that strongly indicates that the execution contexts of Susser cannot be established and exist without having user processes running within them is the fact that Susser refers to the contexts as "execution contexts" (see e.g. page 10, lines 26-31, page 11, lines 13-15, etc.). The use of the word "execution" is quite telling because it strongly suggests that the purpose of the contexts is to support execution of processes. If no processes are executing, then there is no need for an execution context. Based upon this rationale, Applicants strongly believe that, unlike the non-global zones recited in claim 28, the execution contexts of Susser cannot be established and exist without requiring user processes to be running therein. Thus, this aspect of claim 28 is not taught by Susser.

Since neither Schaefer nor Susser teach this aspect of claim 28, even if the references were combined (assuming for the sake of argument that it would have been obvious to combine the references), the combination still would not yield the method of claim 28. Therefore, Applicants respectfully submit that claim 28 is patentable over Schaefer and Susser, taken individually or in combination.

Applicants further submit that claims 29 and 32-39, which depend from claim 28, and which recite further advantageous aspects of the invention, are likewise patentable over Schaefer and Susser for at least the reasons given above in connection with claim 28.

Claim 40

Claim 40 is a machine-readable storage medium counterpart of method claim 28. Applicants submit that claim 40 is patentable over Schaefer and Susser for at least the reasons given above in connection with claim 28.

Applicants further submit that claims 41 and 44-51, which depend from claim 40, and which recite further advantageous aspects of the invention, are likewise patentable over Schaefer and Susser for at least the reasons given above in connection with claim 40.

Claim 52

Claim 52 is an apparatus counterpart of method claim 28. Applicants submit that claim 52 is patentable over Schaefer and Susser for at least the reasons given above in connection with claim 28.

CONCLUSION

For the foregoing reasons, Applicants submit that all of the pending claims are patentable over the art of record, including any art cited but not applied. Accordingly, Applicants respectfully request that this response be entered and made of record, and that a notice of allowance be issued.

The Examiner is invited to telephone the undersigned attorney to discuss any issues that may advance prosecution.

To the extent necessary to make this reply timely, Applicants petition for an extension of time under 37 C.F.R. §1.136.

If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to apply any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,
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